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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/736,336	12/15/2003	Hyunjun Kim	P17176	3721
28062	7590	03/21/2006	EXAMINER	
BUCKLEY, MASCHOFF, TALWALKAR LLC			MAI, ANH T	
5 ELM STREET			ART UNIT	
NEW CANAAN, CT 06840			PAPER NUMBER	
			2832	

DATE MAILED: 03/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

11A

<b>Office Action Summary</b>	<b>Application No.</b> 10/736,336	<b>Applicant(s)</b> KIM ET AL.	
	<b>Examiner</b> Anh T. Mai	<b>Art Unit</b> 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE \_\_\_\_\_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 January 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 5-11 is/are rejected.
- 7) ☒ Claim(s) 4 and 12-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakamatsu [JP 11219825] in view of Kyriazidou [6759937].

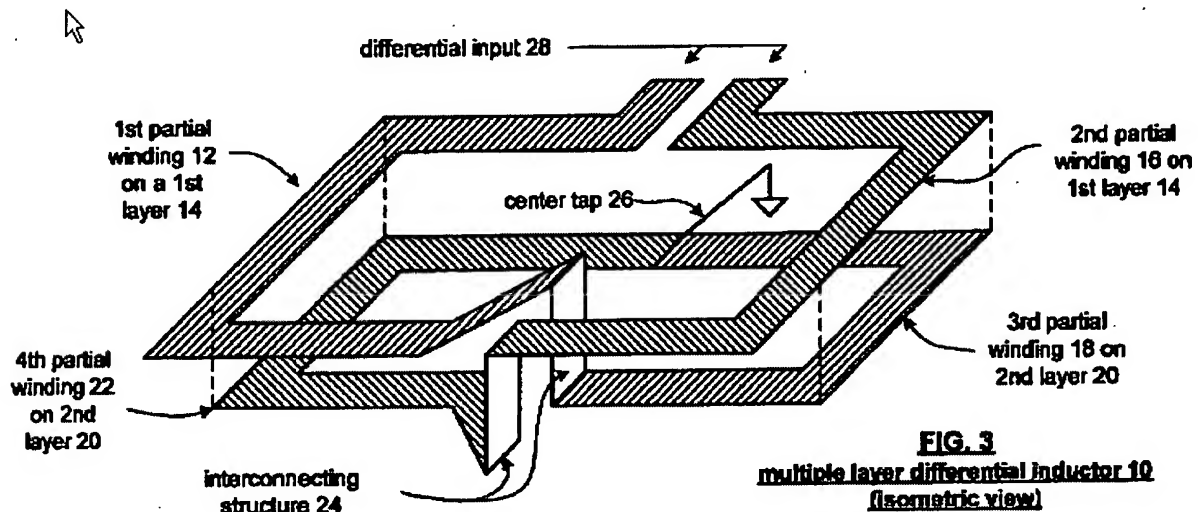
Wakamatsu discloses:

- a first portion of a spiral inductor L1 disposed in a first layer of multilayer substrate;
- second portion of spiral inductor L2 disposed in a second layer of multilayer substrate
- a shielding plane [ground plane] disposed between the first portion and the second portion of the inductor [figure 3].

Wakamatsu discloses the invention as claimed as cited above except for the second portion of the inductor coupled at a plurality of locations to the first portion. Kyriazidou discloses a multilayer inductor having first portion of winding 12 on first layer 14 of integrated circuit, second portion winding 16 on first layer, third portion winding 18 on second layer 20 of integrated circuit; the first portion winding 12 connected to third portion winding 18 by interconnecting 24, second winding portion 16 connected to fourth winding portion 22 by interconnecting structure 24 [col 3, lines 14-37]. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to use the multiple layer inductor as taught by

Art Unit: 2832

Kyriazidou to the inductor as disclosed by Wakamatsu. The motivation would have been to minimize the use of integrated circuit real estate, operates at high frequencies and has a relatively high Q factor [col 4, lines 65-68]. Therefore, it would have been obvious to combine Wakamatsu with Kyriazidou.



With respect to claim 3, current is to flow in the first direction in the first portion and second direction in second portion opposite to the first direction [figure 3].

With respect to claim 6, Kyriazidou discloses vias 24 coupled the first and second portions.

With respect to claim 7, Wakamatsu discloses pin holes 9 coupled the first and second portions.

With respect to claim 8, dielectric layer 7a disposed between first layer and shielding plane and layer 6a disposed between second layer and shielding plane.

With respect to claims 9-11, the claims are rejected for reciting method/step derived from the structure of claims 1-3 which are rejected above.

*Response to Arguments*

3. Applicant's arguments with respect to claims 1-3 and 5-11 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh T. Mai whose telephone number is 571-272-1995. The examiner can normally be reached on 5/4/9 Schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2832

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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**ANH MAI  
PRIMARY EXAMINER**